

REMARKS

Claims 1-20 are pending in the present case. The Specification is amended herein to correct a clerical error. Figure 3 is amended herein to correct an informality. Claims 1, 8, 14, and 15 are amended herein. Claim 14 is amended herein to correct an informality.

103(a) Rejections

Claims 1, 5-7, and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hashimoto (U.S. Patent 5,784,132). Applicant has reviewed Hashimoto and respectfully submits that the present invention as recited in Claims 1, 5-7, and 14 is not rendered obvious in view of Hashimoto.

Applicant respectfully states that the amended Independent Claim 1 includes the limitation "wherein said dummy pixels allow light to pass through to improve contrast of edge-displayed images of said matrix." This limitation is supported in the specification in numerous places including page 23 lines 11-13. This limitation is not taught or rendered obvious in view of Hashimoto.

Specifically, Applicant understands Hashimoto to teach the dummy pixels are entirely covered by a black matrix or mask 12. The dummy pixels of Hashimoto are used to absorb external electrostatic stress and increases light shielding effect for the display device. Applicant respectfully states that the dummy pixels of Hashimoto are not used to provide contrast improvement and increased viewability of edge-displayed characters. In fact, Applicant

understands Hashimoto to teach away from the use of dummy pixels for contrast improvement. They are instead used as an additional layer of light shielding. In fact, Hashimoto's dummy pixels, being black masked, appear no different to a viewer than the typical black frame surrounding most LCD displays. As such, Hashimoto fails to appreciate the contrast problems addressed by the claimed invention. Therefore, Applicant respectfully states that Hashimoto does not teach or render obvious the limitations of Independent Claim 1.

Therefore, Applicant respectfully submits that the rejection of Independent Claim 1 under 35 U.S.C. § 103(a) has been overcome, and that Independent Claim 1 is in condition for allowance. Additionally, Claims 2-7 are dependent on Independent Claim 1. Accordingly, Applicant also respectfully submits that the rejection of Claims 2-7 under 35 U.S.C. § 103(a) has been overcome, as these claims are dependent on allowable base claims and recite additional limitations.

Claims 2, 3, 8-10, 12, 13, and 15-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hashimoto (U.S. Patent 5,784,132) in view of Hill et al. (U.S. Patent 6,577,291 B2). Applicant has reviewed Hashimoto in view of Hill et al., and respectfully submits that the embodiments of the present invention as recited in Claims 2, 3, 8-10, 12, 13, and 15-20 are not obvious in view of Hashimoto and Hill et al., alone or in combination.

Applicant respectfully states that the amended Independent Claims 8, and 15 include the limitation "wherein said dummy pixels allow light to pass through to improve contrast of edge-displayed images of said matrix." This

limitation is supported in the specification in numerous places including page 23 lines 11-13. This limitation is not taught or rendered obvious in view of Hashimoto over Hill et al.

Specifically, Applicant understands Hashimoto to teach the dummy pixels are entirely covered by a black matrix. The Hashimoto dummy pixels are used to absorb external electrostatic stress and increases light shielding effect for the display device. Applicant respectfully states that the dummy pixels of Hashimoto are not used to provide contrast improvement and increased viewability of edge-displayed characters. In fact, Applicant understands Hashimoto to teach away from the use of dummy pixels for any type of contrast improvement. They are instead used as an additional layer of light shielding.

The combination of Hashimoto and Hill et al. fails to render obvious the claimed invention because Hill does not remedy the defects of Hashimoto. With respect to Hill et al., Applicant understands the Figures (e.g., Figures 15-19) of Hill et al. to teach characters being displayed at the edge of the display. Furthermore, Hill et al. does not teach a pixel border of dummy pixels that surrounds a matrix of pixels. Therefore, Applicant respectfully states that Hill et al. does not teach the use of dummy pixels to provide contrast improvement for increased viewability of edge-displayed characters. Therefore, Applicant respectfully states that neither Hill et al. nor Hashimoto teaches or render obvious the limitations of Independent Claims 8 and 15. Furthermore, Applicant respectfully states the combination of Hill et al. and Hashimoto does not teach or make obvious the limitations of Independent Claims 8 and 15.

With respect to Claims 2, 9, and 15, Applicant respectfully states that the limitation "a back lighting element for illuminating said matrix and said pixel border" is not taught or rendered obvious in view of Hashimoto over Hill et al.

Specifically, Applicant understands Hashimoto to teach the dummy pixels are entirely covered by a black matrix. The Hashimoto dummy pixels are used to absorb external electrostatic stress and increases light shielding effect for the display device. Applicant respectfully states that the dummy pixels of Hashimoto are therefore no capable of being illuminated by a back lighting element. They are instead used as an additional layer of light shielding.

The combination of Hashimoto and Hill et al. fails to render obvious the claimed invention because Hill does not remedy the defects of Hashimoto. With respect to Hill et al., Applicant understands the Figures (e.g., Figures 15-19) of Hill et al. to teach characters being displayed at the edge of the display. Furthermore, Hill et al. does not teach a pixel border of dummy pixels that surrounds a matrix of pixels. Therefore, Applicant respectfully states that Hill et al. does not teach the use of a back lighting element for illuminating the pixel border because Hill et al. does not teach a dummy pixel border. Therefore, Applicant respectfully states that neither Hill et al. nor Hashimoto teaches or render obvious the limitations of Claims 2, 9, and 15. Furthermore, Applicant respectfully states the combination of Hill et al. and Hashimoto does not teach or make obvious the limitations of Claims 2, 9, and 15.

Therefore, Applicant respectfully submits that the rejection of Independent Claims 8 and 15 under 35 U.S.C. § 103(a) has been overcome, and that Independent Claims 8 and 15 are in condition for allowance. Furthermore, Applicant respectfully submits that the rejection of Claims 2, 9, and 15 under 35 U.S.C. § 103(a) has been overcome, and that Claims 2, 9, and 15 are in condition for allowance. Additionally, Claims 10-14 are dependent on Independent Claim 8 and Claims 16-20 are dependent on Independent Claim 15. Accordingly, Applicant also respectfully submits that the rejection of Claims 10-14 and Claims 16-20 under 35 U.S.C. § 103(a) has been overcome, as these claims are dependent on allowable base claims and recite additional limitations.

References cited

The Applicant has reviewed the following reference: Nakamura et al. (U. S. Patent 6,204,895 B1), that was cited but not relied on, and believes the present invention as claimed to overcome the reference.

CONCLUSION

In light of the above remarks, Applicant respectfully requests reconsideration of the rejected Claims.

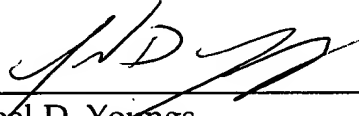
Based on the amendments and arguments presented above, Applicant respectfully asserts that Claims 1-20 overcome the rejections of record and, therefore, Applicant respectfully solicits allowance of these Claims.

The Examiner is invited to contact Applicant's undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

WAGNER, MURABITO & HAO LLP

Date: _____



Joel D. Youngs
Reg. No. 52,389

Two North Market Street
Third Floor
San Jose, California 95113
(408) 938-9060